Art. IV. *Observations on Elephantiasis.* By C. W. Pennock, M. D. of Philadelphia.

AMONG the numerous institutions of Paris which are devoted to medicine, no one surpasses in importance and interest the Hôpital St. Louis. This noble establishment is situated on a high eminence near the north-eastern part of the city, and was originally founded by Henry the Fourth in the year 1607 as a receptacle for the leprous. For a long period this antique structure received scarcely any attention from the foreign medical visitor. Situated far from the centre of the city, not attached to the medical school, and not presenting men of genius or industry among its clinical professors, it was considered merely as a receptacle for incurable diseases, and the student found nothing to repay him for his visit to a scene of misery and distress. It was reserved for Professor Alibert to change this feeling, and to place the Hôpital St. Louis among the most celebrated of Europe. This eminent professor first directed the attention of pathologists to this institution by his work on the diseases of the skin. Since that time its importance has been properly appreciated.

The eminent names of Biett, Alibert, Lugol and Richerand occur, in the list of its clinical professors, and crowds of students from the different quarters of the globe avail themselves of its medical advantages. The hospital contains upwards of a thousand beds, and though from its original destination it receives many chronic cases, yet from its locality, its doors are necessarily open to different acute and surgical diseases.

The division under the charge of MM. Biett and Alibert comprises two hundred and twenty beds. During a visit to Paris in 1832–3, through the kindness of these gentlemen I obtained free access to their wards. It was however principally in the service of M. Biett, who had under his direction one hundred and sixty patients distributed in four wards, remarkable for their beauty and convenience, that I made most of my observations on cutaneous diseases. M. Biett facilitated any inquiries by every means in his power, and it is to him and to M. Martins, the aide naturaliste of the school of medicine and the interne at St. Louis, that I owe the greater part of the notes I have made. The observations are about a hundred in number, and I propose selecting from them such as may exemplify the practice of that eminent pathologist. Before presenting any of these cases, I would observe, that I have considered the classification of Bateman and Willan as adopted by M.

Biett, as preferable to that of M. Alibert. The first cases which are presented are those of elephantiasis which were in St. Louis in 1832. The pathological history of this affection is exceedingly imperfect; much is yet to be desired, and the investigation of the disease offers a wide field for observation. The object of the writer is to present the subject to those whose opportunities may be favourable to its elucidation.

Elephantiasis of the Arabs complicated with frambœsia.—Barbier, aged twenty, by profession a joiner, entered the Hôpital St. Louis, service of M. Biett in the autumn of 1833. In the month of December, I collected the following facts respecting his case.

He was born in the Department of Haute-Saone; has never been in tropical climates, but has always lived in France, and his parents were free of all cutaneous disease. His nourishment has always been good. During the first years of childhood until he was nine years of age, he enjoyed good health; from that period until the age of seventeen he was affected with a succession of abscesses in the groins, on the neck, arms, and at the sternal extremity of the left clavicle. From the appearances of the cicatrices, there is no doubt, but, that these abscesses were scrofulous. They are of a brown colour, almost livid, intermixed with white, of an irregular form, and an uneven surface.

The present affection commenced two years ago, immediately above the great toe of the right foot, by a slight elevation and discoloration of the skin, attended with local pain and some fever; these symptoms were followed by a small, soft, projecting tumour of a red colour which bled upon the slightest touch.

Six months afterwards the patient contracted a blenorrhagia, which ceased in a month under the treatment of injections of infusion of marsh-mallow, drinking the decoction of sarsaparilla and the liquor of Van Swieten. No secondary symptoms followed, but the cutaneous affection was subsequently augmented; since that time he has not had any venereal symptoms. The disease extended itself by the successive formation of the spongy tissue from the toes to the superior part of the thigh. It presents, according to its degree, four principal forms.

First. A small, indolent, subcutaneous tubercle of the size of a pea, causing a slight elevation of the skin. This is the commencement.

Second. Convex elevations exactly circular rising from one to four lines above the skin, surrounded by a brown circle varying in diameter from a quarter of an inch to one and a half inches, of a red colour, soft, spongy, analogous to the fungus of wounds, and bearing some resemblance to raspberries lying side by side, and exuding a red serosity.

Third. Masses formed by the union of the above, but of irregular forms, of variable size, covering the leg and the inferior part of the thigh. The greater part of these tubercles have the same appearance as those which are isolated. Where the healing process has commenced the surface is drier, less elevated, and not so irregular. At the superior and inferior part of the leg the vegetations have the forms of small fleshy tongues, imbricated, resembling the crest of the cock.

Fourth. Cicatrices, which are sometimes large, smooth, of a white colour, slightly elevated above the healthy skin; sometimes the fungosities seem to have dried up without changing form, and have assumed a brown, livid appearance.

The union of all these alterations have changed the form of the limb, and gives it the appearance of the elephantiasis of the Arabs. The circumference of the superior two-thirds of the diseased leg is one inch more than that of the corresponding part of the other: the inferior third is one inch and three-quarters more than the left. The limb is the seat of excessive itching, and when cauterization is attempted by the per-nitrate of mercury the patient suffers excruciating pain. With the exception of the cutaneous affection his general health appeared good during the winter of 1833–4. Treatment—Infusion of hops for habitual drink, with ʒij. Sub-carb. soda, per Oj.; alkaline baths daily, and cauterization with per-nitrate of mercury, (nitrique acide de mercure.)

April and May.—After the first of April, excessive diarrhœa commenced, attended with extreme prostration of strength; the tongue was red, dry; thirst extreme; abdomen slightly painful upon pressure; the pulse frequent, (88,) and feeble; his usual cheerfulness forsook him, his mind became depressed, and he complained bitterly of his situation. The diarrhœa was arrested at intervals by regulating his diet, and by opiates and astringents, but was renewed by the imprudent excess of the patient. During this time the vegetations, (fungosities,) and the tissue of the cicatrices ulcerated, and the diseased limb was covered with extremely painful ulcers, very irregular in their forms, their edges perpendicular, and internally of a grayish colour. The slightest pressure upon them produced an exudation of very fœtid pus. With these symptoms the patient died on the second of June.

Autopsy, thirty hours after death.—The skin on every part of the diseased limb was thickened, and with the cellular tissue beneath was from one-fourth of an inch to an inch and a half thick. On the cicatrized points the epidermis was smooth, and beneath this the entire thickness of the cellular and adipose substance, with the exception of a few isolated masses of adeps, was replaced by a white, fibrous, aponeurotic tissue, which was firmly attached to and blended with the dermis. In the points in which cicatrization had not commenced, the epidermis appeared detached from the dermoid mucous tissue, which was red, thickened, slightly uneven, (mamelonné,) bearing some resemblance to the intestinal mucous membrane, and could be raised without dissection from the subjacent adipose layer. In the middle of the thigh between the sartorius and rectus femoris muscles, was an abscess of the size of a goose-egg, containing a white, tenacious pus; and on a level with the internal malleolus, all the cellular tissue for the space of two inches was changed into a sanious mass of a slate-gray colour, and of a fœtid odour. At the external healthy parts of the leg, the adipose substance was two lines in thickness, soft, and of a clear light-yellow colour; in the diseased parts, on the contrary, it was an inch thick, and separated into masses by a white tissue. This tissue was firm, resistant, and was penetrated with difficulty by the scalpel; the cells formed by the interlacing of its fibres contained beside the adeps, a great quantity of serous and gelatinous fluid. In the parts which were highly diseased, the skin was entirely destroyed, and the ulceration extended to the adipose layer; on the internal and superior part of the leg and beneath the aponeurotic fascia was an abscess of the size of a hen's egg, containing greenish pus, and partly lined with a false membrane. The tunics of the internal saphena vein were thickened, and when cut across, the cut extremity remained open like an artery. The tendons, bones and periosteum were healthy.

Thorax.—A small group of tubercles were found at the summit of the right lung. Near these was a cavity traversed by fibrous bands, and was evidently a cicatrized tuberculous cavern. The rest of the lungs crepitant, and floated when thrown on water.

Heart.—The heart was soft, and the parietes of the ventricles thin.

Abdomen.—The liver was much enlarged, it not only occupied the epigastric region, but extended into the left hypochondriac; the volume of the left lobe was almost equal to that of the right, its entire weight eight pounds. Externally and internally it was yellower than usual. The gall-bladder contained a greenish bile; its ducts were unobstructed. The mucous membrane of the stomach, and the intestines in their entire extent had its normal colour and consistence.

There was neither redness nor softening, nor induration of this tissue.

Remarks.—The hypertrophy of the adipose substance, the hardness of the cellular tissue, and the effusion of serosity and gelatinous fluid, leave no doubt of this disease being an elephantiasis of the Arabs. These characteristics, and more especially that of the presence of the serous secretions, has induced M. BOUILLAUD to consider this disease as bearing a strong pathological resemblance to the œdema of phlegmasia dolens of women. It is much to be regretted, that the details of the case have not been collected with more precision; some interesting facts are however deducible from it. The disease occurred in a tuberculous subject; it supervened upon the healing of scrofulous abscesses, and the appearance of frambœsia occurred before the patient had contracted any venereal disease. M. ALARD, to whom the medical profession is greatly indebted for the lucid manner in which he has examined the history of this disease, assigns as one of the causes of its production the suppression of some habitual evacuation—in this case the coïncidence of the suppression and the appearance of the disease is presented. M. Alard has not, however, been able to collect a sufficient mass of evidence to establish the fact; the present case is, therefore, offered merely to excite further observation. Although Alard mentions, on the authority of HENDY, that frambœsia complicates the disease, yet he has not given any detailed case of its concurrence. Judging from the circumstance of its being rarely mentioned by authors, it cannot occur frequently. Frambœsia has been placed by a distinguished writer among the syphilitic diseases. In this case it occurred in a person whose parents had been free of any syphilitic taint, and previous to his exposure to infection. Elephantiasis of the Arabs seems to have been first described by RHAZES. The name has been the cause of much confusion, and it was not until HILLARY and HENDY of Barbadoes gave their account of the glandular disease of that island, that the profession appear to have had any definite notions upon the subject. The medical world is indebted to those authors for the suggestions of its being a disease in which the glands and lymphatics are particularly and principally affected. Alard, with great research and with indefatigable industry, has investigated the subject very thoroughly, and proves, from a comparison of the symptoms, that the glandular disease of Barbadoes of Hendy, the perical and andrum of Ceylon, the colic of Japan, the elephantiasis of Rhazes, the fleshy hernia of Prosper Alpinus, and the sarcocele of Egypt, are pathologically the same disease. It is not the intention of the writer of this communication to enter into a detail of his reasoning, and he begs, therefore, to refer to the author in question. Previous to leaving the subject, he would wish to state, that Alard found this disease infinitely more common in Europe than was supposed, and the truth of this observation has been confirmed by ALIBERT, RAYER, and BIETT.

Respecting its pathology, the writers are not unanimous in their opinions. Alard considers it as uniformly depending upon an inflammation of the lymphatics; Biett and Rayer acknowledge that this is frequently the case, but that it is not necessarily the primitive affection, and that it may occur as a secondary lesion after the enlargement of the other tissues. M. Bouillaud[*] reports a case occurring in a woman, in which the inferior extremities were enormously distended and exceedingly hard, the disease resembling exactly elephantiasis. Upon a post mortem examination, it was found that the skin and subjacent cellular tissue were an inch and a half thick, having the appearance of the skin of the hog; that the lumbar portion of the vena cava, and all the veins of the inferior extremities were obstructed by deposition of fibrinous matter. The lymphatics were healthy. Hypertrophy in this case would seem to be consecutive upon obliteration of the veins. In the present state of the science, the question of the inflammation of the lymphatics is not determined, and is thus left as a problem to the pathological observer.

The anatomical investigations respecting this disease seem to have been limited principally to the local examinations of the affected part. The pathological researches have not been extended to the internal viscera, and hence the history of the disease in that respect is exceedingly obscure.

Hendy has found the lymphatic ganglions hardened, or in suppuration, and larger than natural; the absorbents were dilated, having their parietes so enfeebled, that it was impossible to distend them by an injection. The areolar structure of the cellular tissue is distended by a thick, viscous, gelatinous fluid, mingled with a serous fluid. The cellular tissue is found much developed and hardened. The skin may preserve its natural colour and appearance, but it generally presents an alteration of structure; it is ordinarily much thickened.

M. ANDRAL reports a post mortem examination of a patient in whom one of the legs was enormously distended by elephantiasis. Upon dissection of this limb, the subcutaneous and inter-muscular cellular tissue was found hard and much developed, resembling the sub-mucous cellular tissue when in a scirrhous state, indurated and becoming more dense as it approached the cutis vera; this was much thickened, and frequently could not be separated from the sub-cellular tissue; it was not, however, either injected or modified in its colour. Above this was found a tissue evidently distinct from the dermis, and which appeared to be to this what the villi are to the intestinal mucous tissue. Between these papillæ and the epidermis were three distinct laminæ; one, the most internal, extremely delicate, and which filled up the inequalities of the subjacent papillæ, was formed of a cellulo-fibrous tissue, and received no vessels, it corresponds with the "couche albide profonde" of GAULTIER, or the "couche epidermique" of DUTROCHET. A second, exterior to this, composed of dark-coloured, delicate filaments, interlaced in every direction, formed a net-work analogous to the coloured lamina of the skin of negroes. Finally, a third directly beneath the epidermis, which was variable in thickness, sometimes merely presenting a white line similar to that mentioned as overlaying the papillary structure, at other times thicker, harder, like a series of small superposed scales, corresponding with the "couche-albide superficielle" of Gaultier, and the "couche cornèe of M. Dutrochet.

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[*] Archives Générales de Médecine. Tome 1re, p. 567.

From these facts it follows, that the dermis or cutis vera is composed of two parts, which ordinarily confounded, have, however, so dependent a condition upon each other, that it is only in certain pathological states that they can be isolated.*

Much of the uncertainty of this disease doubtless arises from the fact of numerous diseases pathologically different, being called by the name of elephantiasis of the Arabs. Thus, some authors designate by this title every enlargement or swelling of the cellular tissue of the limbs, of the scrotum, of the face, independently of those by œdema or infiltration of blood.

M. Alard restricts the appellation to a particular affection of the skin, and the subcutaneous tissue and lymphatic system, which is announced at first by the formation of a hard cord, which is painful, knotted, following the course of the lymphatics and glands, and characterized subsequently by a swelling and permanent induration and augmentation of the skin and cellular tissue, with morbid increase of adipose matter, accompanied by a serous and gelatinous effusion in the diseased parts, the dimensions of which often become enormous.

Various causes are assigned for the production of this disease. Thus, insufficient nourishment, or food of a bad quality; excessive heat, with a moist atmosphere charged with the exhalations from a marshy soil; extreme neglect of cleanliness, &c. are all considered as being important agents in its production.

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* Andral, Anatomie Pathologique. Tome 1re, p. 169 à 175.

Climate unquestionably has a direct influence upon its formation. In the Island of Barbadoes this disease is endemic, and cases of it are so numerous among the inhabitants, that the title of "Barbadoes leg" is one of its most common appellations. Hendy considers that the destruction of the forests, which formerly covered that island, is the cause of its remarkable prevalence. The temperature, in consequence of this disappearance of the woods, is remarkably hot and arid, and he refers the proximate cause of the disease to these characteristics of the climate.

Alard, who examines in detail the question of the causes, arrives at the conclusion, that the formation of the disease is not owing to the quality of the water, the nourishment of the individual, the heat, dryness, or humidity of the climate, but that it depends upon sudden exposure, when heated, to currents of air.* He also proves satisfactorily from many observations, that the disease is neither hereditary nor contagious.

The symptoms of the disease as given by this writer, are the following:—The attack is sudden and unexpected. At first a pain is experienced in a gland, or in the course of the principal trunks of the lymphatics; these vessels are almost always hard, knotted, and presenting the appearance of small, tumefied glands, which are oftentimes discoloured. Sometimes the course of this cord which follows the pain is indicated by a red line, unaccompanied by elevations; this is always the case when the attack has been slight. The diseased part becomes red, swells, and presents an erysipelatous appearance, and is often phlegmonous. The concomitant fever, if the attack be severe, is preceded by a chill, and accompanied by intense thirst, nausea and vomiting; if the chill be severe, the reäction is correspondent. After a longer or shorter duration the fever disappears, and the affected part becomes swollen, and continues inflamed for several days. The inflammation ceases, but the swelling and enlargement continue; it appears to be œdematous in the commencement of the disease, but after a few attacks, the diseased part becomes very hard, and does not yield to the pressure of the finger. Frequent erysipelatous attacks supervene, and the permanent enlargement, which is the consequence, soon manifests the character of the inflammation. The disease may attack any part of the body, but it ordinarily commences upon the feet or malleolus, by the appearance of small, red lines, which soon extend to the legs and thighs.

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* Histoire de l'Elephantiasis des Arabes, par Alard. From page 323 to 354.

GUILLEMEAU, who studied the disease very attentively in the Isle of France, remarks, that generally only one foot is primitively affected, but that after the thigh of the diseased limb begins to enlarge, then the other manifests the commencement of the disease at the malleolus.*

When the disorder attacks the inferior region of the abdomen, the signs which present are rather more obscure. It produces sharp pain, much uneasiness, but without any marked character; but the enormous distention of the abdomen which succeeds these pains, or the tumefactions round the verge of the anus, or of the enlargement of labia in women, or of the scrotum in men, soon dissipate the first uncertainty.

The skin not being the primitive seat of the disease, is not necessarily affected; thus, it sometimes presents merely a whiter appearance, with a slight hardening or resistance upon pressure, *(renitance,)* sometimes the subcutaneous veins are enlarged, varicose tumours result, and the skin is of a violet colour. This tissue, however, does sometimes present various alterations. Thus, in addition to the erysipelatous appearance previously mentioned, vesiculous inflammation is often presented; in this case a slight effusion ensues, followed by thin, soft, yellowish scales; in other instances appearances similar to those of ichthyosis take place; finally, in certain circumstances, fissures with ulcerations ensue, which become covered with thick, yellow scales.

The lymphatic glands oftentimes are hardened and scirrhous, or suppurate, or even become gangrenous, and frequently deep, fetid ulcerations ensue in the limbs after their size has become enormous.

Treatment.—Respecting the treatment, much is yet to be decided. Biett recommends that topical depletion by leeches should be employed at the commencement of the disease, when the inflammation of the lymphatic vessels is manifested by their redness and hardness; the leeches should not, however, be applied *directly* upon the course of the vessels, but a little on either side. In conjunction with this, he uses emollient applications, and enjoins entire rest. In the chronic state, (in which it is generally seen,) venesection has been proposed, but its success does not seem to recommend it; in some cases, indeed, it has proved positively detrimental. Rayer recommends very highly, scarifications along the course of the lymphatics, and this is a favourite remedy of Lisfranc, who reports many cases where the result has been very satisfactory.*

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* Alibert, Dermatoses Lepreuses, p. 259.

The experience of the Hôpital St. Louis is, however, in favour of a different course, and the eminent physician,† of that institution considers that the best treatment consists in compressions, friction, and the use of local vapour baths. Compression is made by a bandage from an inch to an inch and a half in width, and applied by a moderate force. The frictions should be made with an ointment of hydriodate of potash in the proportion of hydriodate, ʒss. to adeps, ℥j.; this application, however, is to be relinquished whenever an acute inflammation supervenes. Whilst in the vapour bath, the patient should be directed to use friction upon the diseased part. As regards the amputation of the affected limb, experience is decidedly adverse to its employment, as the disease almost invariably attacks other members.

The internal treatment being very similar to that of the elephantiasis of the Greeks, will be given in the remarks of that disease.

Elephantiasis of the Greeks.—Mr. L. a lawyer, aged twenty-eight, born at Crepa in Alentejo, in Portugal, entered the hospital of St. Louis in the winter of 1832. The patient is a large, muscular man, with black eyes and hair; his intelligence and literary acquirements are remarkably great. He gives the following history of his case:—His parents enjoyed good health, and had never had any cutaneous disease. He had no serious indisposition until the sixteenth year of his age, (1820,) when the present disease commenced by an extreme feebleness in the ring and little finger of the left hand; he lost the power of extending them voluntarily, they became flexed against the palm of the hand, and it was necessary to employ the right hand when he wished to straighten them. This loss of movement has gradually increased, and he now finds it impossible to overcome the flexion. In 1827 a discoloration of from three to four inches square, of a light-brown colour, (café au lait clair,) slightly elevated, appeared upon the calf of the left leg. This spot was insensible to slight pressure, and it required a sharp blow before the patient perceived any sensation in it. This insensibility extended over the whole limb; and in illustration of this fact, he mentions, that being near a stove he was severely burned, but was not aware of the injury until he observed the consequent vesication.

In 1828 a small tubercle, of the size of a pea, appeared below the chin, which was repeatedly cut by the patient in shaving himself: this tubercle was followed by several others, and in 1830 the entire face was covered. No assignable cause can be given for the production of the present disease. The patient has never had the slightest syphilitic symptoms, has never committed excesses of any kind, and his situation in life has always secured to him all possible comforts.

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* Rayer, Maladies de la Peau. Art. Elephantiasis des Arabes.

† Biett.

I saw him for the first time in January of 1832, and his appearance, which has been but slightly modified since, was as follows:—

The entire face was of a brownish-yellow colour, (bistre of the painters,) the nose, eyebrows, and more especially the vicinity of the chin, are covered with tubercles of different dimensions, varying in size from that of a pea to a hazel-nut. The smaller tubercles are convex; the larger flattened. When examined closely, their colour is redder than that of the face. They are hard and incompressible.

These elevations produced a singular effect upon the physiognomy of the patient: the beard continues to grow from among the groups on the chin, whilst the hair of the eyebrows has fallen, and the entire face is peculiar: many of the students imagine that it resembles that of the lion. The arms are covered with spots more or less raised above the level of the skin, some are merely perceptible to the touch, whilst others are elevated from one to two lines. Their colour varies from a light brown, (café au lait,) to that of the darkest bistre. The skin where they exist is insensible, but in the interspaces of the elevations it is remarkably white and delicate.

On the left arm, where the patient was burned, we observe slightly depressed cicatrices of a violet colour. The skin on the hands is extremely fine and delicate, and redder than usual. The fingers of both hands are flexed; those of the left immoveable. The patient can feebly grasp objects for a short time with the right hand. The neck and body are entirely free of cutaneous disease.

The inferior extremities are covered with spots analogous to those on the arms. On the upper part of both feet are large cicatrices, slightly depressed, of a red colour, caused by the burn of 1827, and which frequently ulcerate; these ulcers are round, with perpendicular edges, which heal by rest and the frequent use of the vapour bath. The general health of the patient is good, but in the spring and autumn he has violent attacks of pain in the head; the tubercles then increase in size, become redder, and are extremely painful upon pressure: combined with these symptoms are—a frequent pulse, loss of appetite, and obstinate constipation. Venesection uniformly relieves him, whilst leeches applied to the neck produce no beneficial effect.

On the 15th of November, 1833, the patient experienced all the symptoms above-mentioned attended with great prostration of strength. Pulse 95. These were the precursors of an erysipelas of the face, which was first observed on the following day. The face became red, tumefied, and painful; the tongue white; thirst extreme. Venesection and lemonade.

17th. Large vesicles have formed on the cheeks, but on the lips and chin a puriform secretion has taken place. The acute symptoms of yesterday are slightly modified; the skin is moist and covered with perspiration. From this time the disease rapidly declined, and at the end of ten days the skin has assumed its ordinary brown tint. The tubercles of the forehead and nose were less prominent, but the lips and cheeks were covered with thick, dark-coloured crusts, which fell off spontaneously at the end of a week.

The primitive disease of the face was evidently rendered much better by this attack of erysipelas. The tubercles were flattened and diminished in size, their colour became more like that of the healthy skin; the eyes were less sunken into the orbit, and the chin not so prominent. A circumstance connected with this attack of erysipelas, produced a strong impression upon the medical attendants of Mr. L. He had persuaded himself the erysipelas would prove fatal, and it was, with feelings bordering on despair, that he found his health would be reëstablished.

Many modes of treating the disease were adopted. At the commencement of 1832, M. Biett prescribed the proto-iodide of mercury; it was gradually increased until given in the dose of three grains a day, of which the patient took eighty pills. This treatment produced no diminution of the tubercles, and the violent pains it caused in the stomach, prevented any further employment of it. After this, recourse was had to numerous vesications, of an inch and a quarter in diameter, followed by a cauterization with per-nitrate of mercury: this also caused intolerable pain, and was abandoned. Subsequently, the size of the blisters was diminished to one-fourth of an inch, and the vesicated surface was washed with a solution of nitrate of silver. The tubercles on the cheek and chin were diminished in volume by these applications, but this result was scarcely obtained upon one part of the face before they reäppeared upon another, rendering it very evident that the melioration was but momentary. The patient after remaining for several months in Paris without any very great permanent amelioration, returned to Portugal in January, 1834.

Remarks.—Much obscurity has arisen from the circumstance of two diseases so different in character as the malady of Barbadoes, and that, of which we have just detailed an observation, being called by the same generic title of elephantiasis. The elephantiasis of the Arabs is entirely distinct in its appearance and character from this affection. It does not present the tubercles which are developed in the skin and the subcutaneous tissue, but consists in an enlargement of one or more parts of the body, and especially of the legs. The skin in elephantiasis of the Arabs, is not, as in that of the Greeks, primitively affected.

The elephantiasis of the Greeks has been attributed to a syphilitic origin, but on insufficient evidence. In the case of Mr. L. there had never been any venereal infection. Again, the appearance of syphilitic tumours are unlike in colour, in density, and in volume. The tumours of elephantiasis are larger, softer, and have not the copper tint. The syphilitic ulcerations have deep, perpendicular edges: their bases are grayish, and surrounded by a hard cellular tissue: their form is almost circular, and unlike the superficial ulcers which are situated on a soft, fungous tumour, which constitutes that of the elephantiasis of the Greeks.

One of the most remarkable symptoms which attends this disease, is the loss of sensibility in the parts affected. This has been remarked by almost all pathologists who have written upon the subject, excepting Rayer, who mentions two cases in which this phenomenon was wanting.[*]

A very interesting circumstance connected with the history of this case, is the amelioration of the disease in consequence of the occurrence of erysipelas. M. Rayer reports an observation in which a similar effect took place, and after repeated attacks of erysipelas, an inveterate elephantiasis was almost entirely cured. Similar facts have been observed by M. Biett, and with the "view of increasing the vitality of the affected parts at the commencement of the disease," he employs dry frictions, volatile liniments, or, what he prefers, vesicatories upon the spots and tubercles. Under this plan of treatment, several of his patients have recovered. When the disease is more advanced, he recommends frictions with the ointment of hydriodate of potash, (Hydriodate potas. ℈j. to Adeps, ℥j.) which he has found highly serviceable. Conjoined with these topical applications, he also employs the local vapour bath, thrown in a jet upon the affected parts. If the disease be general, vapour baths for the entire body are recommended.

When the disease has been of long duration, and the tubercles disseminated over a large surface, in addition to lotions slightly irritating, he recommends alkaline or sulphur baths. An internal treatment is also demanded; he uses accordingly the sudorifics—the tincture of cantharides and the arsenical preparations. The decoction of sarsaparilla with guaiacum, squills with a small quantity of Daphne mazereon may be administered to the patient. His usual dose of the tincture of cantharides is, at the commencement of its exhibition, three drops in the morning before eating, and gradually increasing to twenty or twenty-five. M. Biett gives, however, the preference to the arsenical preparations. Of Fowler's solution he recommends three or four drops a day at the commencement, gradually increasing to twenty or thirty, but watching with great care its effects upon the system, and regulating its administration accordingly. The experience of M. Biett, in the internal use of the different preparations of iodine, is not yet sufficiently great to permit him to give a definite opinion respecting their merits. Reasoning from analogy, however, this would appear to be among the most valuable means of combating this disease.

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[*] Rayer, Maladie de la Peau. Tome 1re, page 660.

In India the Asiatic pills, consisting of one-thirteenth of a grain of arsenic to nine times that quantity of black pepper, have been much used, and cases are reported where the result has been favourable to its employment.*

M. DE POUS has seen a cure effected by the use of the Lisbon diet drink conjoined with squills. M. DAYNAC a case of cure by the use of the hydrochlorate of gold combined with the powder of the Lycopodium clavatum, and applied by frictions to the tongue and gums. ROBINSON has lauded very highly the Asclepias gigantea pulverized, in combination with calomel and the antimonial powder.†

Calomel does not appear to have been much employed by the continental European practitioners, and we have very few cases reported by them in which it was used. This powerful agent should not be omitted whilst speaking of the remedies employed in the treatment of elephantiasis. But the facts collected on the therapeutic history of this disease are not yet sufficient, to say positively what are the best means of combating it. M. Alibert remarks, with great truth, "tout est à rechercher, tout est à decouvrir dans le traitement de cette maladie." He urges the great importance of attention to the food and habits of the patient.

It is much to be regretted that the observations respecting this disease, and those of cutaneous diseases in general, have been so vague and unsatisfactory. Had the rigid accuracy which characterizes the founder of "the numerical system of observation"* been adopted, what positive and certain results should we not have seen? Much, however, is to be expected from that eminent physiologist, M. Biett: and, from the great mass of facts which he has collected, this still obscure part of medicine will probably be much elucidated.

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* Rayer. Maladie de la Peau. Tome 1re, page 687.

† Alibert. Clinique de l'Hôpital St. Louis.

The anatomico-pathological appearances have been reported too vaguely to present any definite notion of the lesions which may characterize this disease.

Inflammation of the skin after recurring repeatedly on the same part causes a tuberculous induration, having a white appearance, and which resists the scalpel. The skin which covers these indurations is generally thinner than that on healthy surfaces.

Tubercles are frequently found on the mucous surfaces of the mouth, pharynx and larynx. In cases where the voice of the patient was much altered, tubercles with ulcerations were invariably found in the larynx: in one instance the arytenoid cartilages were almost entirely destroyed. The lungs are generally tuberculous, and the peritoneum and mesentery are also implicated in the same manner. The mucous coat of the intestines are reported as being almost always more or less ulcerated; and the glands of Peyer are frequently the seat of ulceration.

Alibert and the Baron Larrey cite cases where the bones were found carious or spongy.

Elephantiasis Topica, (PLENCK.)—Frederic, aged seven and a half, was born in the Island of Trinidad, of a French father and Indian mother, both of whom enjoyed excellent health, and were free of cutaneous disease. He left America at three and a half years of age, previous to which time he had always been very healthy. His appearance is that of a delicate child, with but little muscular development; dark eyes; black hair; very intelligent, and of remarkable quickness of perception. Shortly after his arrival in France he had an attack of continued fever. The present disease commenced in the month of August, 1830. The first symptom which was manifested, was a difficulty in holding the pen in writing; the indicator of the right hand became flexed, and the child lost the ability of extending it voluntarily by its extensor muscles. The middle finger of the same hand soon afterwards became also flexed, and the wrist was extremely weak. The power of extension of the right hand becoming more and more impaired, his father took him to the springs of Neris in the autumn of 1831, at which place he passed six weeks. It was there that the first ulceration of the fingers took place, and caused the loss of the nail of the indicator of the right hand: since that time the disease has made continued progress.

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* M. Louis.

December 23d, 1832, *present situation.*—*Right hand.* The arm being in pronation, the hand and wrist falls perpendicularly by its own weight, and the child finds it impossible to raise it, except by a general movement of the whole arm. The action of the flexor muscles, however, is unimpaired: he can bend the wrist, or grasp substances between his fingers. The different bones of the fingers are flexed on each other, and upon those of the metacarpus. The terminal bones of the indicator, as well as that of the third finger, have been separated by ulceration at the joint. The nails of all the other fingers have fallen off by ulceration, leaving surfaces more or less concave, of a pale-red colour in the centre, dry, cracked, and resembling ulcerated chilblains in the process of healing. The rest of the terminal extremities of the fingers are covered with a hardened skin, which in places is also ulcerated. Beside these alterations of structure, there is an ulceration at the junction of the second and third phalanges of the ring finger.

Left hand.—The patient can readily extend and flex this hand on the forearm, although all the phalanges of the fingers of the second and third row, are permanently bent on the first, and cannot be extended by their proper extensor muscles. The thumb is uninjured. The indicator has a transversal fissure with a red base, at the junction of the first with the second phalanx; at the other joint of the same finger is an elliptical ulceration of the size of a small bean which commenced fifteen days ago.—*Middle finger.* At the base of the nail is a round ulceration surrounded with a yellow, indurated skin. The terminal bone of the middle finger has fallen by ulceration, and the rounded extremity is covered with a hard, thick skin, like that covering the parts of the feet which are pressed upon in walking. There is also a slight ulceration on a level with the articulation of the first and second bones. The little finger is uninjured.

Right foot.—At the junction of the fifth metatarsal with the tarsal bone, exists an elliptical ulceration one-fourth of an inch long, with a red base, and surrounded by a yellow skin of a hardness equal to that of horn. Below the patella of the same leg, are seen two brown cicatrices, which are the traces of previous ulcerations.

The sensibility of the hands is very obtuse; the child does not perceive a slight touch, and does not feel unless the fingers are strongly pressed, or picked with a sharp instrument.

None of the ulcerations have been either preceded, accompanied, or followed by any pain. The child is very cheerful, takes great pleasure in his sports, and the sensibility of his diseased hands is so obtuse that he frequently scratches up the earth with them. His general health is excellent. *Treatment*—Baths for the hands every day for an hour, in decoction of poppy-heads; infusion of hops for drink, with nourishing and tonic diet.

April 6th.—On the right foot, behind the cicatrices previously mentioned, a vesicle of the size of a hazle-nut made its appearance. It is perfectly round, is formed by the elevation of the epidermis only, and contains a serosity slightly thickened; it is not surrounded by any traces of an inflammatory circle. The child does not suffer any pain, and his nurse is confident that he has not been burnt. Next day the vesicle, (bulle,) broke spontaneously, and left a superficial ulcer of the same size with a very dry surface.

19*th.* The ulceration has not extended superficially, but has increased in depth. It is attended with very slight suppuration; is not painful, its colour is a pale-red; is without granulations, and its borders are perpendicular.

28*th.* Same state of ulcer.

May 1*st.*—Numerous fleshy granulations are observed at the bottom of the ulceration; the suppuration is rather more abundant.

15*th.* The place of the ulceration is now indicated by a small depressed surface, slightly red, where the skin is finer than the rest, and insensible to the touch. During the spring he had frequent paroxysms of spasmodic cough, which rendered it necessary to have recourse to venesection. There did not appear to be any connexion between this cough and the disease of the skin.

December.—The cutaneous disease has not made any progress, with the exception, that in the month of July, a vesicle similar to that last mentioned, appeared on the right knee, which disappeared at the end of three weeks. The general health of the child is excellent.

Remarks.—This variety of elephantiasis has been described by Plenck under the appellation placed at the head of the observation. M. Alibert remarks in his clinique, that medical travellers in India have brought him great quantities of the nails which had spontaneously fallen off from the fingers of the persons affected with this disease. M. Bonpland relates that the disarticulation of the joints followed by sloughing and loss of the bones of the hand are of frequent occurrence in South America: even the teeth fall from the alveoli as a result of this affection.